

Abstract Submitted
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Numerical Solution of Quantum Cosmological Model Simulating Boson and Fermion Creation VIC CHRISTIANTO, SciPrint.org, FLORENTINS SMARANDACHE, University of New Mexico — A numerical solution of Wheeler-De Witt equation for a quantum cosmological model simulating boson and fermion creation in the early Universe evolution is presented. This solution is based on a Wheeler-DeWitt equation obtained by Krechet, Filchenkov, and Shikin, in the framework of quantum geometrodynamics for a Bianchi-I metric. Further discussions should take into account a few implications of the solution of Wheeler-DeWitt equation. Considering that the Schrodinger equation can be used to solve the Casimir effect, therefore one may expect that there exists some effects of Casimir effect in cosmological scale, in a sense that perhaps quite similar to Unruh radiation, which can be derived from the Casimir effective temperature. Anosov has pointed out a plausible deep link between Casimir effect and the fine structure constant by virtue of the entropy of coin-tossing problem. However apparently he did not mention yet another plausible link between the Casimir effective temperature and other phenomena at cosmological scale. Other implication may be related to the Earth scale effects, considering the fact that Schrodinger equation corresponds to the infinite dimensional Hilbert space.

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